

# PM Ammunition Sole Source to Full and Open Procurement Transition Plan



**FINAL**  
**26 October 2015**

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## A. Introduction

The Department of Defense (DoD) encourages its acquisition professionals “to do more without more” (Defense) in its Better Buying Power (BBP) publications. BBP serves as a reliable source of best business practices which when implemented, “improve industry productivity, and provide an affordable, value-added military capability to the Warfighter” (Defense).

Initially published in 2010, BBP is comprised of an established set of acquisition fundamentals and principles to “achieve greater efficiencies through affordability, cost control, elimination of unproductive processes and bureaucracy, and promotion of competition” (Defense). BBP best practices are furnished to stimulate both productivity and innovation within private industry and the Government. It is publicized as a means to enhance knowledge, skills, and abilities of the acquisition workforce.

In the Office of the Under Secretary of Defense, Acquisition, Technology and Logistics White Paper entitled, “Better Buying Power 3.0”, dated 19 September, 2014, the following is provided;

### *. Promote Effective Competition:*

*Emphasize competition by creating and maintaining competitive environments.*

This is a “core” BBP item that would be in any version of BBP, as competition is the most effective tool we have to control cost. In the absence of direct competition, anything that creates a “competitive environment” (where the incumbent is concerned about maintaining his or her position relative to an alternative product or service provider) has value to the Department. When direct competition at the product level is not economically viable, then alternative means of introducing competitive pressure or direct competition at lower levels should be pursued.

To that end, PM Ammunition has established a plan to move towards elimination of the requirement to use sole source contracting to acquire established ammunition requirements.

Table 1 (next page) is a list of current ammunition items that PM Ammo uses Sole Source (SS) or Performance Specifications Acquisition Strategies to procure.

**Table 1: Marine Corps Unique Ammunition Items with Limited Competition**

<b>DODIC &amp; NOMENCLATURE</b>	<b>Vendor</b>	<b>Acquisition Strategy</b>
AA91, 5.56mm MK289 Blue Marking	GD-OTS	SS
AA92, 5.56mm MK293 Red Marking	GD-OTS	SS
AXX3, 9mm Blank Dog Training Round	GD-OTS	SS
AB05, 5.56mm MK302 Blue Marking	GD-OTS	SS
AB06, 5.56mm MK 303 Red Marking	GD-OTS	SS
BA21 40mm MK 281-1 Practice Day/Night	American Rheinmetall	SS
BA35 40mm M1110 Practice Day/Night	American Rheinmetall	SS
GG24 66mm Screening Smoke	Rheinmetall	Performance Spec
KM03 Smoke Pot MK-7	Diehl	Performance Spec
HA29 66mm Rocket M72A7	Nammo Talley	SS
HA21 66mm Rocket M71AS Trainer	Nammo Talley	SS
CA45 120mm HE M1101 EFSS	GD-OTS	SS
CA46 120mm Illum M1105 EFSS	GD-OTS	SS
CA49 120mm WP M1103 EFSS	GD-OTS	SS
CA57 120mm Multi-Purpose High Explosive	Rheinmetall	SS
HAX1 66mm Rocket Fire From Enclosure	Nammo Talley	SS
HAX2 66mm Rocket Fire From Enclosure	Nammo Talley	SS
LA44 CTG Signal and Illum, White Star	Chemring	Performance Spec
LA45 CTG Sim Airburst	Chemring	Performance Spec
LA46 CTG Sim Hostile Fire	Chemring	Performance Spec
LA47 CTG Sim AT Gun Launch Stinger	Chemring	Performance Spec

## **B. Purpose**

Within BBP 3.0, Focus Area 5 of 7 is “Promote Effective Competition” (Defense). Best practices promulgated therein provide means to facilitate efforts on creating and maintaining competitive environments, as competition promotes both cost control and overall cost reduction. Subsequent to providing the methodology to be implemented proactively when establishing relationships with other Marine Corps organizations, this plan will outline steps that have been taken already or will be taken to move to a more competitive procurement position.

As we progress, we will strive to more effectively align ourselves with other Marine Corps organizations, either officially in writing via Memorandum of Understanding (MOU) or unofficially to foster relationships with partnership activity ground rules for any weapon system programs that will be fielded to Marines. The MOU will establish a means for PM Ammo to provide ground ammunition support to other organizations with ammunition contract development, qualification test requirements, Weapons System Explosives Safety Review Board (WSESRB), cataloging and transition of the acquisition documents from the respective organization to PM Ammo for establishing and sustaining the ammunition program.

Whether or not relationships are established with MOUs or within annual Home-on-Home (HoH) meetings, or program reviews, it is collaboration and communication that is of the utmost

importance. At minimum the following discussions should be addressed or be included when establishing partner relationships:

- *Details about specific projects and initiatives on which the organizations will collaborate, including the scope and schedule*
- *Associated joint venture costs allocation and authorization*
- *Guidelines defining distribution and ownership of jointly developed materials and use post MOU*
- *Language outlining if and how partnership will be socialized to government and industry*
- *The length of time that the MOU will be valid with language that leaves opportunity to renew the agreement*
- *Point of contact for each organization to facilitate collaboration*
- *Dated signatures from the respective organizations leadership, i.e. PMs, PdM's, IPT members, or other designated decision makers*
- *Meeting minutes that provide specific actions with owners and due dates*

This recommendation is not all inclusive and specific details can be tailored as needed. The ultimate goal is to foster synergy amongst the organizations.

## **C. Importance**

Competition, direct or indirect, is the most effective motivator for industry to reduce costs and improve performance. The Competition in Contracting Act (CICA) was enacted in 1984 to promote competition and thus reduce costs and improve performance. CICA established full and open competition as the standard for most procurement actions while at the same time allowing for a number of exceptions, some of which require that agencies request offers from as many potential sources as is practicable under the circumstances. In the “Guidelines for Creating and Maintaining a Competitive Environment for Supplies and Services in the Department of Defense” dated December 2014, published by the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, the following reasons were provided as “Why Competition is Important?”

### **Competition is important for a number of reasons:**

- *Creates an incentive for contractors to provide goods and services at a lower price (economic efficiency);*

- *Spurs innovation of transformational technologies, which allows the Department to field the best weapon systems for our warfighters quickly;*
- *Yields improvements in the quality of products delivered and services rendered (firms that turn out low quality are driven out of the market and are unable to effectively compete);*
- *Affords the Department the opportunity to acquire performance improvements (e.g., faster, lighter, more sustainable) by using “best value” source selection criteria;*
- *Provides opportunities for capable small businesses to enter new markets;*
- *Enhances (or maintains) a strong defense industrial base which provides an operational surge capability to handle demand spikes, and;*
- *Curbs fraud by creating opportunities to re-assess sources of goods and services reinforcing the public trust and confidence in the transparency of the Defense Acquisition System.*

Source: (Office of the Under Secretary of Defense for Acquisition, 2014)

*PM Ammunition intent is to leverage from the above realized opportunities and benefits of full and open competition.*

## **D. Current Environment**

The Marine Corps Ground Ammunition Presidential Budget 2016 (PB16) is \$1.7B across the Future Years Defense Budget (FYDP). Of that \$1.7B, \$360M (21%) will be used to procure the Sole Source rounds listed below (see Table 2, next page). PM Ammunition will concentrate efforts on these procurements to identify, improve, transition and maintain a competitive environment to achieve reduction in cost, creating greater efficiency in execution of the Procurement Ammunition, Navy and Marine Corps (PANMC) Budget.

Several programs already have a competition strategy and are highlighted in light-green below (Table 2, next page). Other programs, highlighted in yellow, have recently been analyzed with determinations provided below. Programs with no competitive strategy and not warranted at this time are highlighted red- pending potential removal from the Total Munitions Requirement (TMR) and highlighted olive-green- recently transitioned procurement to the Army.

**Table 2: PB16 Planned Sole Source Procurements (\$M)**

DODIC	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	Totals
AA91	0.000	0.341	1.341	1.344	1.345	1.360	1.387	7.118
AA92	0.000	0.853	1.856	1.858	1.861	1.881	1.919	10.228
AXX3	0.347	0.149	0.077	0.078	0.077	0.116	0.118	0.962
AB05	0.000	2.795	3.806	3.816	3.828	3.873	3.950	22.068
AB06	0.000	1.692	2.270	2.702	2.706	2.734	2.789	14.893
BA21	0.000	0.000	0.000	22.349	17.835	10.047	10.248	60.479
BA35	13.113	7.375	0.000	0.000	0.000	0.000	6.309	26.797
GG24	0.693	0.000	0.000	0.000	0.000	0.000	0.000	0.693
HA29	0.000	2.073	0.000	0.000	10.000	0.000	0.000	12.073
CA45	6.648	0.000	0.000	0.000	0.000	7.243	17.488	31.379
CA46	0.000	0.000	0.000	0.000	8.946	6.378	15.596	30.920
CA49	10.666	5.011	19.760	10.916	10.928	6.446	15.665	79.392
CA57	3.257	7.061	4.826	12.847	11.851	5.340	14.506	59.688
LA44	0.777	0.000	0.524	0.000	0.000	0.000	0.000	1.301
LA45	0.697	0.000	0.089	0.000	0.000	0.000	0.000	0.786
LA46	0.751	0.000	0.685	0.000	0.000	0.000	0.000	1.436
LA47	0.305	0.000	0.092	0.000	0.000	0.000	0.000	0.397
<b>Totals</b>	<b>37.254</b>	<b>27.350</b>	<b>35.326</b>	<b>55.910</b>	<b>69.377</b>	<b>45.418</b>	<b>89.975</b>	<b>360.610</b>

- Planned strategy initiated for transition to F&O from SS procurement strategy
- Competitive analysis conducted for possible transition to F&O from SS procurement strategy
- No competitive analysis conducted due to current CD&I plan to remove item from TMR
- No competitive analysis conducted due to item recent transition to the Army

## **E. DODIC Level Plans:**

a. **CA57:**

PM Ammo has conducted a bridge procurement of CA57, 120mm Multi-Purpose High Explosive Round to support the Marine Corps until the US Army's Advanced Multi-Purpose Program (AMP) is ready in FY19/20. The Marine Corps will then transition to the AMP program and procure the round thru the SMCA.

b. **AA91/AA92:**

There is no current plan for procurement of these items as Capabilities Development and Integration (CD&I) is taking steps to remove from Total Munitions Requirements as of Sep 2015.

c. **AB05/AB06:**

In FY16, PM Ammo will award a sole source contract to cover a period until a full and open contract can be awarded in FY17.

d. **AXX3:**

There is no plan to transition this item to full and open acquisition strategy as there are no other vendors capable of providing special 9mm upper receiver compatible with cartridge utilized.

e. **BA21:**

PM Ammo will continue to monitor expenditures and award one sole source contract in FY17 in accordance with requirements. Subsequent procurement will be made through the Army for its new 40mm High Velocity day/night training round, currently in development with expected availability in FY18-19.

f. **BA35:**

PM Ammo will transition to the Army's new 40mm Low Velocity day/night training round expected to be available in FY20-21.

g. **GG24:**

PM Ammo has transitioned this item to the Single Manager for Conventional Ammunition. It has been procured from Rheinmetall of Germany using a Performance Specification.

h. **KM03:**

PM Ammo has transitioned this item to the Single Manager for Conventional Ammunition. It has been procured from Diehl of Germany using a Performance Specification.



i. **HA29/HA21/HAX1/HAX2:**

The current LAW family has been transitioned to the Single Manager for Conventional Ammunition under a new 4-year contract. PM Ammo is awaiting the US Army to finalize Total Munitions Requirements for the Individual Assault Munition (IAM) which is expected to be fielded in FY23.

j. **CA45 :**

PM Ammo is currently funding a DoD Ordnance Technology Consortium (DOTC) task to demonstrate a Brazil manufactured version of the French rifled 120mm High Explosive mortar cartridge. If the demonstration is successful, the TDP will be generated and used to award follow on full and open contracts.

k. **CA46/CA49:**

There is currently no plan to transition the 120mm rifled Illuminations (CA46) or 120mm rifled White Phosphorus (CA49) cartridges from sole source to F&O competition. Both of these items are used in the M327, 120mm Rifled Mortar which is a proprietary design with TDA of France. Currently, only General Dynamics- Ordnance and Tactical Systems (GD-OTS) has the US rights to sell the compatible rounds for this system. Currently, there exists no other vendor which markets the 120mm rifled Illumination and smoke cartridge. PM Ammo will remain vigilant in its efforts to identify potential vendors and/or determine means to stimulate/ incentivize future competition.

l. **LA44/LA45/LA46/LA47:**

PM Ammo is currently in the process of awarding a sole source contract with Chemring for this family of ammunition. A Contract Line Item Number (CLIN) for a Technical Data Package (TDP) will be included in this contract which will provide a means for future F&O acquisition.

## F. Competitive Forces Analysis

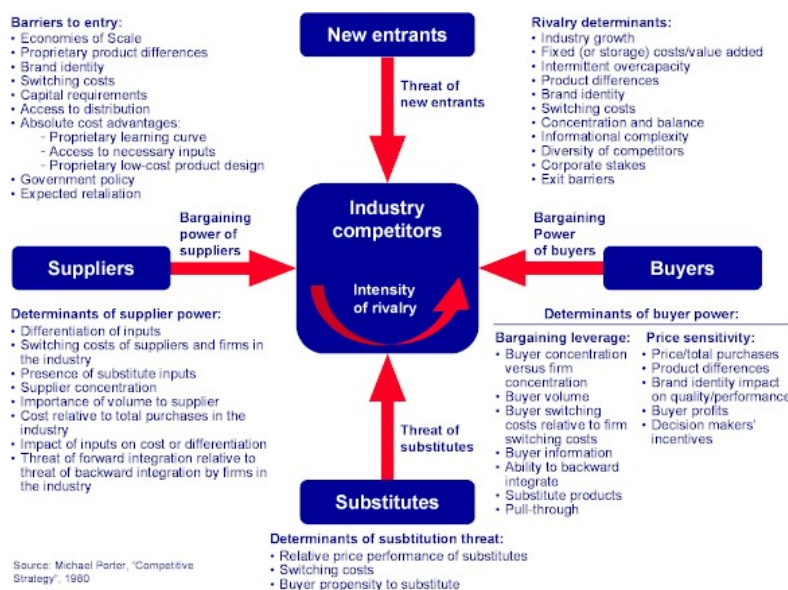
As a means to assess the current environment and evaluate opportunities to incorporate DoD BBP fundamentals and principles, two specific competitive forces analyses were performed. To analyze the level of interest industry would have in context to overall business strategy/ profitability (attractive or unattractive), the Porters Five Forces Analysis was used as it provides the best framework to determine an industry's weaknesses and strengths.

Using Porter's Five Forces Model, analyses were conducted on the competitive environment for the remaining items in the budget, Expeditionary Fire Support System (EFSS) Department of Defense Identification Codes (DODICs) CA46, CA49 cartridges, and AXX3 market. This model is illustrated in Figure 1. It identifies and provides means of analyzing five competitive forces that impact every industry:

1. Competition in the industry
2. Potential of new entrants into industry
3. Power of suppliers
4. Power of customers
5. Threat of substitute products

The model shows the relationship between, suppliers, buyers, and potential competitors. In the analysis conducted herein, the CA46 120mm Illumination, M1105, cartridge and CA49 120mm White Phosphorus, M1103 cartridge all operate within the same competitive environment, so are examined together. This examination will be followed with an analysis of the AXX3 market.

**Figure 1: Porter's Five Forces Competition Model**



## Porter's Analysis #1

### EFSS Ammunition: CA46 and CA49

#### 1. Competition in the Industry

General Dynamics Ordnance and Tactical Systems (GD-OTS) is the current owner of the US manufacturing rights for the TDA EFSS 120mm Rifled Mortar. GD-OTS has many rivals in the large caliber ammunition production enterprise. Orbital Alliant Techsystems (Orbital ATK) and American Ordnance are the two largest competitors to GD-OTS. Both could lead efforts to manufacture rounds to compete with GD-OTS if the government could provide a technical data package. With the trend towards smaller Defense budgets, the motivation for companies to attempt to enter this market are increasing.

#### 2. Potential of New Entrants into Industry

To address the proprietary rights barrier, legal issues regarding technical data rights would have to be overcome by the government in order to fund the development of a government owned technical data package. In addition, any vendor entering the market would most likely be met with retaliation from GD-OTS in the manufacturing of supplemental provision of metal parts and other critical energetics for other programs.

#### 3. Power of Suppliers

GD-OTS owns the rights to manufacture the TDA 120mm Rifled Mortar ammunition for US customers. This prevents other suppliers from directly competing with GD-OTS and thereby reducing the price of the ammunition.

#### 4. Power of Customers

The Marine Corps procurements of both the 120mm Illumination and White Phosphorus Cartridges is limited to several thousand rounds thru the Future Year Defense Program (FYDP). Additionally, the Marine Corps represents the only US customer for this ammunition. This limited demand negatively impacts motivation for new producers to enter the market. To increase it's power, the Marine Corps could continue to fund development of a performance enhancing attribute to stimulate competition. Another option would be for the Marine Corps to find another source of the TDP or production outside of the US.

## **5. Threat of Substitute Products**

Currently the Marine Corps can fire smooth bore 120mm mortar rounds from the EFSS mortar, however ammunition range and accuracy are lessened. Initial work has been completed to assess the potential of designing an obturator for the smooth bore ammunition that would improve the range and accuracy when fired from the rifled mortar. The Marine Corps would need to continue to fund this work. This strategy would also allow the Marine Corps to leverage the large volume of smooth bore ammunition the Army has produced to date.

### **Proposed Actions:**

1. Aggressively seek out other sources for the Technical Data Package for French 120mm Rifled Ammunition.
2. Explore benefits of teaming with other members of industry to develop other sources of production for this capability.
3. Continue work with the Army to develop an obturator band to increase the range and accuracy of traditional smooth bore 120mm mortar rounds.

### **Porter's Analysis #2**

#### **AXX3, 9mm Blank Cartridge**

##### **1. Competition in the Industry**

SNC of Canada, a GD-OTS owned subsidiary, owns the data rights for the AXX3, 9mm blank cartridge used for training working dogs in the Marine Corps. The AXX3 requires a special upper receiver for the weapon to fire the AXX3 cartridge. The Marine Corps has already procured the upper receivers. The uniqueness of the design of the cartridges is that the rounds cycle the weapon. Any competing round would need to also cycle the weapon.

##### **2. Potential of New Entrants into Industry**

The procurements of this round are very low annually, amounting to less than \$250K a year. This serves to demotivate companies from entering the market.

##### **3. Power of Suppliers**

SNC does not have any rivals in this market. This market is relatively small.

##### **4. Power of Customers**

The Marine Corps has very little power as requirements for this capability are small. SNC is the dominating supplier in this market.

## 5. Threat of Substitute Products

To date, no substitute has been identified for the SNC round. It will be very difficult to motivate competition into this market when the annual requirement for the Marine Corps is less than \$250K and any vendor seeking to enter the market would need to contribute its own independent research and development (IRAD) funding to develop this capability.

### Proposed Actions:

1. Explore potential of consolidating the buyers of this capability into a single contract, uniting other users into a single economically significant procurement that will increase buyer power and reduce cost.

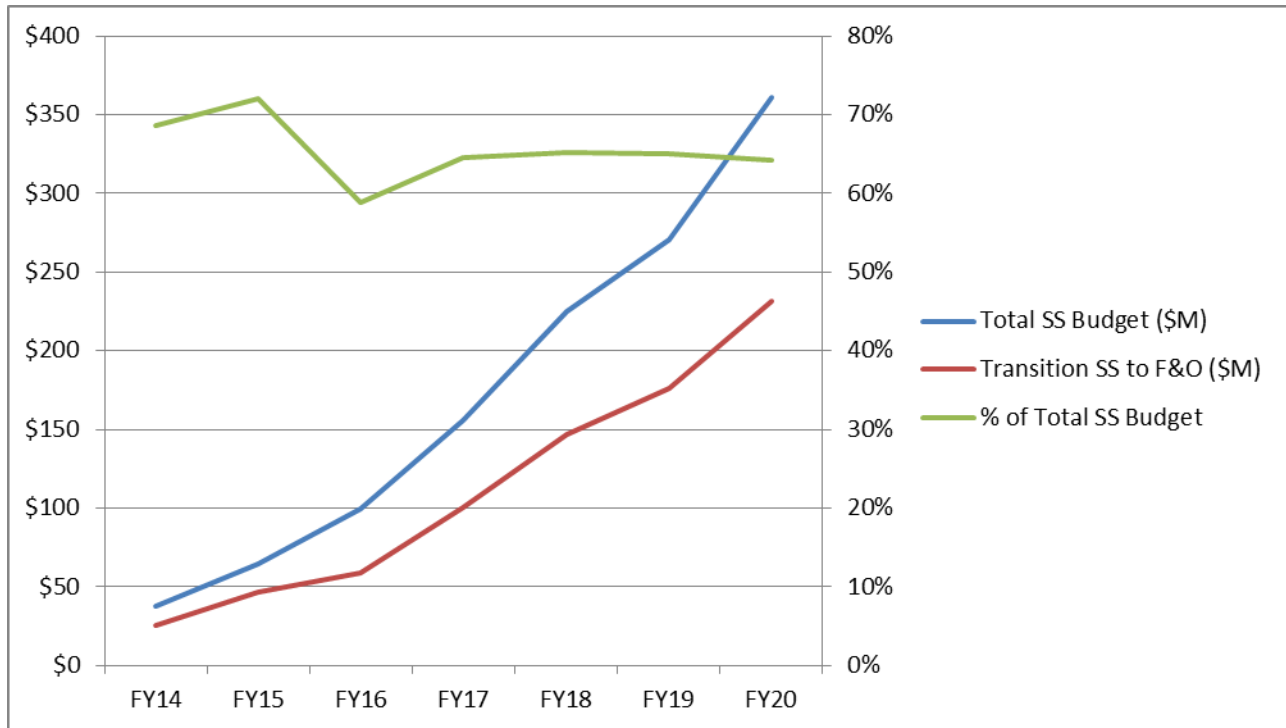
## G. Timeline to Transition for Competitive Based Procurements

Table 3 shows the schedule for transitioning the Marine Corps Sole Source procurements to Full and Open (F&O) procurements thru FY20. Chart 1 provides a funding timeline for how the execution of the transition schedule will result in a reduction of total dollars going to Sole Source contracts. By the end of FY23, PM Ammo will have developed a method to use F&O contracting for 64% of the items listed as Sole Source procurements in the FY16 budget which equates to \$231M of the \$360M budget.

**Table 3: Scheduled Transition to Full and Open Competition**

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22
CA57			Army Awards FRP Contract for AMP			◆		
AA91, AA92	Currently no transition plan to F&O acquisition strategy							
AB05, AB06	2 Contracts for MK281 (SS/Multi-Contract Strategy)			Opt 1 ◆	Opt 2 ◆	Opt 3 ◆	Opt 4 ◆	
AXX3	Currently no transition plan to F&O acquisition strategy							
BA21	USMC Contract for MK281			◆	USMC Fields Low Cost Alternative to MK281			
BA35			Army Developing New 40mm Round					
GG24	Currently no transition plan to F&O acquisition strategy							
KM03	Currently no transition plan to F&O acquisition strategy							
HA21, HA29, HAX1, HAX2	Sole Source SYR Contract Awarded			◆	Army IAM Program Fields System in FY22			◆
CA45	DOTC Contract Award	◆	Brazil Demo	◆	TDP	TDP Validation Contract		
CA46, CA49	Currently no transition plan to F&O acquisition strategy							
LA44, LA45, LA46, LA47		Procure TDP	◆	Opt 1 ◆	Opt 2 ◆	Opt 3 ◆	Opt 4 ◆	

**Chart 1: Sole Source to Full and Open Procurement Transition Plan across the FYDP**



## Conclusion

Using various methodologies to remove barriers to entry, increase buyer power, and stimulate the production of substitute products, PM Ammo will implement strategies to create competition. The basis of strategies outlined herein and subsequent to this publication will be executed in accordance and compliance with DoD Better Buying Power guidance.

Although specific courses of action have been outlined in this document, it is the overall shift in focus to concentrate efforts on how to increase competition in the marketplace that is the key take-away. It is the intent of PM Ammo to remain vigilant in its efforts to consistently execute all practical actions to identify as many potential vendors as possible and to determine means, be it market stimulation and/or market incentivizing to increase competition and reduce overall Government expenditures.

## References

Defense, D. o. (n.d.). Retrieved Sep 30, 2015, from Better Buying Power Aquisition, Technology and Logistics: <http://bbp.dau.mil/>

*Investopedia*. (n.d.). Retrieved Sep 30, 2015, from <http://www.investopedia.com/terms/p/porter.asp>

Office of the Under Secretary of Defense for Acquisition, T. a. (2014, Dec). *Defense Aquisition University*.

Retrieved Sep 30, 2015, from

[http://bbp.dau.mil/docs/BBP\\_2\\_0CompGuidelinesUpdate3Dec2014.pdf](http://bbp.dau.mil/docs/BBP_2_0CompGuidelinesUpdate3Dec2014.pdf)